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10-12-01

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#5/10/25/01  
LETTER

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:

SABNIS, RAM W. et al.

Serial No.: 09/745,350

Filed: December 21, 2000

ORGANIC POLYMERIC  
ANTIREFLECTIVE COATINGS  
DEPOSITED BY CHEMICAL VAPOR  
DEPOSITION

Docket No.: 27710-A

Group Art Unit No.: 1756

Examiner:

Name ✓  
Correction  
Completed

Assistant Commissioner of Patents  
Washington, D.C. 20231

RECEIVED  
OCT 25 2001  
TC 1700

Sir:

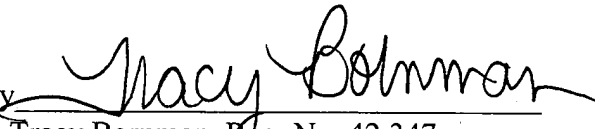
LETTER

We recently received a copy of the Pre-Grant Publication for the above-referenced patent application. The application was published on September 13, 2001, as Publication No. US 2001/0021481 A1. The first named inventor's name is misspelled as RAW W. SABNIS (copy enclosed herewith). The correct spelling of his name is RAM W. SABNIS. This misspelling was the result of an error by the Patent Office, as is shown by the enclosed transmittal letter and Declaration and Power of Attorney where the name is spelled correctly.

Upon conferring with the Office of Patent Publication, it was suggested that we submit a Certificate of Correction. Therefore, a Certificate of Correction is enclosed herewith. It is respectfully requested that this Certificate of Correction be entered, and that the Patent Office's records be corrected as soon as possible so that the correct spelling will be on any patent that may issue from this application.

If anything further is needed to make this correction, please contact the undersigned below.  
Any fee which is due in connection with this Petition should be applied against our Deposit Account  
No. 19-0522.

Respectfully submitted,

By   
Tracy Bornman, Reg. No. 42,347  
2405 Grand Boulevard, Suite 400  
Kansas City, Missouri 64108  
816/474-9050

ATTORNEYS FOR APPLICANT(S)

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : Pub. No. US 2001/0021481 A1

DATED : September 13, 2001

INVENTOR(S) : Ram W. Sabnis; Douglas J. Guerrero; Terry Brewer; and Mary J. Spencer

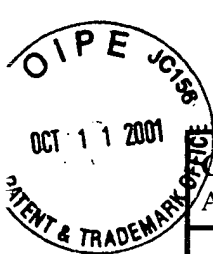
It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

**The correct spelling of the first named inventor's name is RAM W. SABNIS.**

MAILING ADDRESS OF SENDER:

Tracy Bornman, Reg. No. 42,347  
HOVEY, WILLIAMS, TIMMONS & COLLINS  
2405 Grand Boulevard, Suite 400  
Kansas City, MO 64108-2519

PATENT NO. US2001/0021481

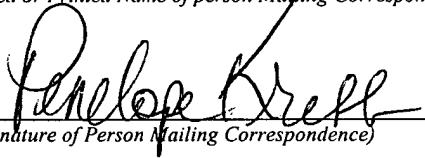


1756

CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)			Docket No. 27710-A
Applicant(s): SABNIS, RAM W. et al.			
Serial No.  09/745,350	Filing Date  December 21, 2000	Examiner	Group Art Unit  1756

Invention: ORGANIC POLYMERIC ANTIREFLECTIVE COATINGS DEPOSITED BY CHEMICAL VAPOR DEPOSITION

I hereby certify that this Express Mail Certification; Letter for Request to Correct Pre-Grant Publication; Certificate of Correction; copies of Front Page of Pre-Grant Publication; Declaration and Power of Attorney; and Original Transmittal Letter; and return postcard is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 in an envelope addressed to: The Assistant Commissioner for Patents, Washington, D.C. 20231 on October 10, 2001.

Penelope Kress  
(Typed or Printed Name of person Mailing Correspondence)  
  
(Signature of Person Mailing Correspondence)

EL888621202US  
(“Express Mail” Mailing Label Number)



US 20010021481A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2001/0021481 A1**  
**Sabnis et al.** (43) **Pub. Date: Sep. 13, 2001**(54) **ORGANIC POLYMERIC ANTIREFLECTIVE  
COATINGS DEPOSITED BY CHEMICAL  
VAPOR DEPOSITION****Publication Classification**(51) **Int. Cl.<sup>7</sup>** ..... **G03F 7/00; C23C 16/00**  
(52) **U.S. Cl.** ..... **430/270.1; 430/311; 430/313;**  
**430/324; 430/950; 427/585**(76) **Inventors:** **Raw W. Sabnis, Rolla, MO (US);**  
**Douglas J. Guerrero, Rolla, MO (US);**  
**Terry Brewer, Rolla, MO (US); Mary**  
**J. Spencer, Rolla, MO (US)**(57) **ABSTRACT**

An improved method for applying organic antireflective coatings to substrate surfaces and the resulting precursor structures are provided. Broadly, the methods comprise chemical vapor depositing (CVD) an antireflective compound on the substrate surface. In one embodiment, the compound is highly strained (e.g., having a strain energy of at least about 10 kcal/mol) and comprises two cyclic moieties joined to one another via a linkage group. The most preferred monomers are [2.2](1,4)-naphthalenophane and [2.2](9,10)-anthracenophane. The CVD processes comprise heating the antireflective compound so as to vaporize it, and then pyrolyzing the vaporized compound to form stable diradicals which are subsequently polymerized on a substrate surface in a deposition chamber. The inventive methods are useful for providing highly conformal antireflective coatings on large substrate surfaces having super submicron (0.25  $\mu\text{m}$  or smaller) features.

**Correspondence Address:****HOVEY, WILLIAMS, TIMMONS & COLLINS**  
**Suite 400**  
**2405 Grand**  
**Kansas City, MO 64108 (US)**(21) **Appl. No.: 09/745,350**(22) **Filed: Dec. 21, 2000****Related U.S. Application Data**(63) **Continuation-in-part of application No. 09/511,421,**  
**filed on Feb. 22, 2000.****TC 17000**  
**OCT 25 2001**  
**RECEIVED**

# UTILITY PATENT APPLICATION TRANSMITTAL (Small Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.  
27710-A

Total Pages in this Submission

## TO THE ASSISTANT COMMISSIONER FOR PATENTS

Box Patent Application  
Washington, D.C. 20231

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

**ORGANIC POLYMERIC ANTIREFLECTIVE COATINGS DEPOSITED BY CHEMICAL VAPOR DEPOSITION**

and invented by:

**RAM W. SABNIS, DOUGLAS J. GUERRERO, TERRY BREWER, and MARY J. SPENCER**

If a CONTINUATION APPLICATION, check appropriate box and supply the requisite information:

☐ Continuation ☐ Divisional ☒ Continuation-in-part (CIP) of prior application No.: 09/511,421

Which is a:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.:

Which is a:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.:

Enclosed are:

### Application Elements

1. ☒ Filing fee as calculated and transmitted as described below
2. ☒ Specification having 36 pages and including the following:
  - a. ☒ Descriptive Title of the Invention
  - b. ☒ Cross References to Related Applications (if applicable)
  - c. ☐ Statement Regarding Federally-sponsored Research/Development (if applicable)
  - d. ☐ Reference to Microfiche Appendix (if applicable)
  - e. ☒ Background of the Invention
  - f. ☒ Brief Summary of the Invention
  - g. ☒ Brief Description of the Drawings (if drawings filed)
  - h. ☒ Detailed Description
  - i. ☒ Claim(s) as Classified Below
  - j. ☒ Abstract of the Disclosure

RECEIVED  
OCT 25 2001  
TC 1700

ENTERED  
DEC 26 2000  
BY argm

PROVISIONAL

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States application(s) listed below:

Application Serial No.	Filing Date	Status (patented, pending, abandoned)
------------------------	-------------	---------------------------------------

CONTINUATION-IN-PART

(Complete This Part Only If This Is A Continuation-In-Part Application)

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose to the Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56(a), which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application:

Application Serial No.	Filing Date	Status (patented, pending, abandoned)
09/511,421	February 22, 2000	Pending

POWER OF ATTORNEY

As a named inventor, I hereby appoint the following attorney(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith:

Robert D. Hovey	19,223	Andrew G. Colombo	40,565
Warren N. Williams	19,156	Scott R. Brown	40,535
Stephen D. Timmons	26,513	Tracy L. Bornman	42,347
John M. Collins	26,262	Tracey S. Truitt	43,205
Thomas H. Van Hoozer	32,761	David P. Ayers	46,529
Thomas B. Luebbering	37,874		

SEND CORRESPONDENCE TO:  
HOVEY, WILLIAMS, TIMMONS & COLLINS  
2405 Grand, Suite 400  
Kansas City, Missouri 64108

DIRECT TELEPHONE CALLS TO:  
  
(816) 474-9050

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor		RAM W. SABNIS	
Inventor's Signature		<i>R. W. Sabnis</i>	
Date	12-19-00	Country of Citizenship	U.S.A.
Residence		2205 Vichy Road, Rolla, Missouri 65401	
Post Office Address		2205 Vichy Road, Rolla, Missouri 65401	
Full name of second joint inventor, if any		DOUGLAS J. GUERRERO	
Inventor's Signature		<i>Douglas Guerrero</i>	
Date	12-19-00	Country of Citizenship	Nicaragua
Residence		11145 Breeden Drive, Rolla, Missouri 65401	
Post Office Address		11145 Breeden Drive, Rolla, Missouri 65401	



**COMBINED DECLARATION AND POWER OF ATTORNEY**(Original, Design, National Stage of PCT  
or CIP Application)

ATTORNEY'S DOCKET NO.

27710-A

As a below named inventor I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name, I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

ORGANIC POLYMERIC ANTIREFLECTIVE COATINGS DEPOSITED BY CHEMICAL VAPOR DEPOSITION

the specification of which: (complete (a), (b) or (c) for type of application)

**REGULAR OR DESIGN APPLICATION**

(a) ☒ is attached hereto.

(b) ☐ was filed on \_\_\_\_\_ as Application Serial No. \_\_\_\_\_ and was amended on \_\_\_\_\_ (if applicable).

**PCT FILED APPLICATION ENTERING NATIONAL PHASE**

(c) ☐ was described and claimed in International Application No. \_\_\_\_\_ filed \_\_\_\_\_ and as amended on \_\_\_\_\_ (if any).

**ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR**

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56(a).

☐ In compliance with this duty there is attached an information disclosure statement. 37 CFR 1.97.

**PRIORITY CLAIM**

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed: (complete (d) or (e))

(d) ☒ no such applications have been filed.

(e) ☐ such applications have been filed as follows

**EARLIEST FOREIGN APPLICATION(S), IF ANY FILED WITHIN 12 MONTHS PRIOR TO SAID APPLICATION**

Country	Application No.	Date of Filing	Date of Issue	Priority Claimed
				<input type="checkbox"/> YES <input type="checkbox"/> NO
				<input type="checkbox"/> YES <input type="checkbox"/> NO
				<input type="checkbox"/> YES <input type="checkbox"/> NO

**ALL FOREIGN APPLICATION(S), IF ANY FILED MORE THAN 12 MONTHS PRIOR TO SAID APPLICATION**
